

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 August 2004 (12.08.2004)

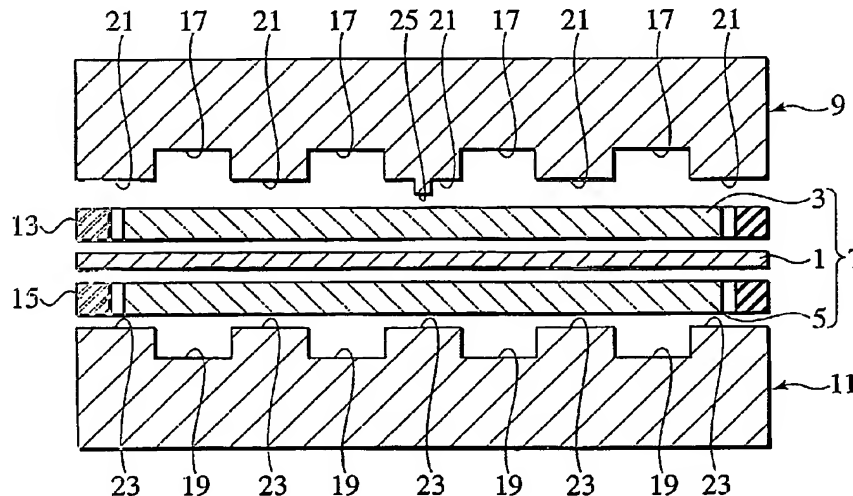
PCT

(10) International Publication Number
WO 2004/068622 A2

- (51) International Patent Classification⁷: H01M 8/02
- (21) International Application Number: PCT/JP2004/000779
- (22) International Filing Date: 28 January 2004 (28.01.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2003-023712 31 January 2003 (31.01.2003) JP
- (71) Applicant (for all designated States except US): NISSAN MOTOR CO., LTD. [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0023 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SHIMOI, Ryoichi [JP/JP], MIYAZAWA, Atsushi [JP/JP].
- (74) Agents: MIYOSHI, Hidekazu et al.; 9th Floor, Toranomon Daiichi Building, 2-3, Toranomon 1-chome, Minato-ku, Tokyo 105-0001 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SI, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: FUEL CELL.



(57) Abstract: A fuel cell which includes: a membrane electrode assembly (7) including an electrolyte membrane (1) and a pair of porous electrodes (3, 5) provided on both sides of the electrolyte membrane (1); and first and second separators (9, 11) sandwiching the membrane electrode assembly (7). Each of the first and second separators (9, 11) is formed to have, on its surface opposite to the membrane electrode assembly (1), a gas flow path (17, 19) and a rib (21, 23) defining the gas flow path (17, 19). The rib (21, 23) of at least one of the first and second separators (9, 11) is provided with a projection (25) for pressing the porous electrode (3, 5).

WO 2004/068622 A2